CLAIMS

What is claimed is:

1. A method, comprising:

propagating a downstream signal on an optical signal conductor from an upstream combiner to a downstream combiner; and

propagating an upstream signal on the optical signal conductor from the downstream combiner to the upstream combiner.

2. The method of claim 1, further comprising conveying the downstream signal from an input port of the upstream combiner to a bi-directional common port of the upstream combiner and conveying the downstream signal from a bi-directional common port of the downstream combiner to an output port of the downstream combiner.

3. The method of claim 1, further comprising conveying the upstream signal from an input port of the downstream combiner to a bi-directional common port of the downstream combiner and conveying the upstream signal from a bi-directional common port of the upstream combiner to an output port of the upstream combiner.

4. The method of claim 1, wherein the downstream signal includes an analog signal.

5. The method of claim 1, wherein the downstream signal includes a digital signal.

6. The method of claim 1, further comprising dropping data to a customer premises from the downstream signal after propagating the downstream signal on the another optical signal conductor from the second upstream combiner to the another downstream combiner.

7. The method of claim 1, further comprising multiplexing the downstream signal before propagating the downstream signal on the optical signal conductor from the upstream combiner to the downstream combiner.

8. The method of claim 1, wherein the upstream signal includes an analog signal.

9. The method of claim 1, wherein the upstream signal includes a digital signal.

10. The method of claim 1, further comprising adding data from a customer premises to the upstream signal before propagating the upstream signal on the optical signal conductor from the downstream combiner to the upstream combiner.

11. The method of claim 1, further comprising demultiplexing the upstream signal after propagating the upstream signal on the optical signal conductor from the downstream combiner to the upstream combiner.

12. The method of claim 1, further comprising:

propagating another downstream signal on another optical signal conductor from another upstream combiner to another downstream combiner; and

propagating another upstream signal on the another optical signal conductor from the another downstream combiner to the another upstream combiner.

13. The method of claim 12, further comprising conveying the another upstream signal from an input port of the another downstream combiner to a bi-directional common port of the another downstream combiner and conveying the another upstream signal from a bi-directional common port of the another upstream combiner to an output port of the another upstream combiner.

14. The method of claim 12, further comprising conveying the another downstream signal from an input port of the another upstream combiner to a bi-directional common port of the another upstream combiner and conveying the another downstream signal from a bi-directional common port of the another downstream combiner to an output port of the another downstream combiner.

15. The method of claim 12, wherein the downstream signal includes an analog video broadcast signal.

16. The method of claim 12, wherein the downstream signal includes a digital signal.

17. The method of claim 12, wherein the upstream signal includes an analog signal.

18. The method of claim 12, wherein the upstream signal includes a digital signal.

19. The method of claim 18, wherein the digital signal includes a packet switched signal.

20. The method of claim 19, wherein the packet switched signal includes a cell-switched signal.

21. The method of claim 20, wherein the cell-switched signal includes an asynchronous transfer mode digital data signal.

22. The method of claim 19, wherein the packet switched signal includes a frame switched signal.

23. The method of claim 22, wherein the cell-switched signal includes a synchronous transfer mode digital data signal.

24. The method of claim 19, further comprising wavelength demultiplexing the upstream signal after propagating the upstream signal on the optical signal conductor from the downstream combiner to the upstream combiner.

25. The method of claim 19, further comprising adding data from a customer premises to the upstream signal before propagating the upstream signal on the optical signal conductor from the downstream combiner to the upstream combiner.

26. The method of claim 12, wherein the another downstream signal includes an analog signal.

27. The method of claim 12, wherein the another downstream signal includes a digital signal.

28. The method of claim 27, wherein the digital signal includes a packet switched signal.

29. The method of claim 28, wherein the packet switched signal includes a cell-switched signal.

30. The method of claim 29, wherein the cell-switched signal includes an asynchronous transfer mode digital data signal.

31. The method of claim 28, wherein the packet switched signal includes a frame switched signal.

32. The method of claim 31, wherein the cell-switched signal includes a synchronous transfer mode digital data signal.

33. The method of claim 28, further comprising wavelength multiplexing the another downstream signal before propagating the another downstream signal on the another optical signal conductor from the another upstream combiner to the another downstream combiner.

34. The method of claim 28, further comprising dropping data to a customer premises from the another downstream signal after propagating the another downstream signal on the another optical signal conductor from the second upstream combiner to the another downstream combiner.

35. The method of claim 12, wherein the another upstream signal includes a digital signal.

36. The method of claim 35, wherein the digital signal includes a packet switched signal.

37. The method of claim 36, wherein the packet switched signal includes a cell-switched signal.

38. The method of claim 37, wherein the cell-switched signal includes an asynchronous transfer mode digital data signal.

39. The method of claim 36, wherein the packet switched signal includes a frame switched signal.

40. The method of claim 39, wherein the cell-switched signal includes a synchronous transfer mode digital data signal.

41. The method of claim 12, wherein the another upstream signal includes an analog return signal.

42. The method of claim 12, further comprising broadcasting at least a portion of the downstream signal to a plurality of users and conveying a signal from at least one of the plurality of users to an input port of the another downstream combiner as the another upstream signal.

43. The method of claim 12, further comprising distributing at least a portion of the another downstream signal to a plurality of users and conveying a signal from at least one of the plurality of users to an input port of the downstream combiner as the upstream signal.

44. A process of operating a cable access television network comprising the method of claim 41.

45. An apparatus, comprising:

an upstream combiner including an upstream bi-directional common port;

an optical signal conductor coupled to the upstream bi-directional common port of the upstream combiner; and

a downstream combiner including a downstream bi-directional common port coupled to the optical signal conductor.

46. The apparatus of claim 45, further comprising an upstream input optical isolator coupled to an upstream input port of the upstream combiner and an upstream output optical isolator coupled to an upstream output port of the upstream combiner.

47. The apparatus of claim 45, further comprising a downstream input optical isolator coupled to a downstream input port of the downstream combiner and a downstream output optical isolator coupled to a downstream output port of the downstream combiner.

48. The apparatus of claim 45, further comprising a wavelength division demultiplexer coupled to an upstream output port of the first upstream combiner.

49. The apparatus of claim 45, further comprising a wavelength division multiplexer coupled to an upstream input port of the upstream combiner.

50. The apparatus of claim 45, further comprising an add device coupled to a downstream input port of the downstream combiner.

51. The apparatus of claim 50, further comprising an optical isolator coupled to the add device.

52. The apparatus of claim 45, further comprising a drop device coupled to a downstream output port of the downstream combiner.

53. The apparatus of claim 52, further comprising an optical isolator coupled to the drop device.

54. The apparatus of claim 45, further comprising:

another upstream combiner including another upstream bi-directional common port;

another optical signal conductor coupled to the another upstream bi-directional common port of the another upstream combiner; and

another downstream combiner including another downstream bi-directional common port coupled to the another optical signal conductor.

55. The apparatus of claim 54, further comprising an upstream input optical isolator coupled to an upstream input port of the another upstream combiner and an upstream output optical isolator coupled to an upstream output port of the another upstream combiner.

56. The apparatus of claim 54, further comprising a downstream input optical isolator coupled to a downstream input port of the another downstream combiner and a downstream output optical isolator coupled to a downstream output port of the another downstream combiner.

57. The apparatus of claim 54, further comprising a wavelength division multiplexer coupled to an upstream input port of the another upstream combiner.

58. The apparatus of claim 54, further comprising a wavelength division demultiplexer coupled to an upstream output port of the another upstream combiner.

59. The apparatus of claim 54, further comprising a drop device coupled to a downstream output port of the downstream combiner.

60. The apparatus of claim 59, further comprising an optical isolator coupled to the drop device.

61. The apparatus of claim 54, further comprising an add device coupled to a downstream input port of the another downstream combiner.

62. The apparatus of claim 61, further comprising an optical isolator coupled to the drop device.

63. The apparatus of claim 54, further comprising:

a drop device coupled to a downstream output port of the downstream combiner;

a customer premises equipment digital receiver input coupled to the drop device, the customer premises equipment digital receiver input including an input optical connector;

an add device coupled to a downstream input port of the another downstream combiner; and

a customer premises equipment digital receiver output coupled to the add device, the customer premises equipment digital receiver output including an output optical connector,

wherein the input optical connector and the output optical connector define physically different, non-interchangeable form factors.

64. The apparatus of claim 54, wherein an input port of the downstream combiner is coupled to an output port of the another downstream combiner.

65. The apparatus of claim 54, wherein an output port of the downstream combiner is coupled to an input port of the another downstream combiner.

66. A cable access television network, comprising the apparatus of claim 39.